

**Protocol  
for  
Incidental Take Authorization**

**Frosted Elfin (*Incisalia irus*)**

---

**Note**

*If carrying out a given protocol is not feasible, or multiple listed species in a given management area pose conflicts, contact the Bureau of Endangered Resources at 608/264-6057. Staff in BER will work with DNR Research staff, species experts and managers to establish an acceptable protocol for a given site that will allow for incidental take without further legal Consultation or public notice*

**I. Species Background Information**

**A. Status**

**State status:** Threatened

**USFWS Region 3 species of management concern?** No

**Number of known sites in Wisconsin:** The species has been found only in the central sand counties of Wood, Juneau, Jackson, Monroe and Adams at less than 20 sites. Surveys of potential habitat in northwestern Wisconsin have not produced evidence of frosted elfins. High potential range includes the area of central Wisconsin from Eau Claire, Jackson, and Monroe Counties eastward to Waupaca, Waushara, and Green Lake Counties.

**Global Range:** From the East coast west to Wisconsin and through the southeastern states to eastern Texas, the species is very localized and rare to uncommon. There are three named subspecies. The Wisconsin subspecies feeds on wild lupine (*Lupinus perennis*) and occurs very sporadically in the east where it possibly may still be found on a few sites in New York, New Hampshire, and Connecticut. The subspecies has been recorded in Maryland and northern Florida as well, but primarily occurs at scattered sites in northern Ohio, Michigan, Wisconsin, and Ontario.

**B. Habitat**

**Larval Host Plant:** Wild lupine (*Lupinus perennis*) is the larval host plant in Wisconsin. It is possible but unlikely the butterfly may use wild indigo (*Baptisia* sp.) here, as does the eastern subspecies.

**General Habitat Description:** Lupine occurs most often on sandy soil on the edge of dry oak/pine forest or in the open to semi-open jackpine/oak barrens habitat. Lupine also grows under canopy where it may occur sparsely and in a vegetative state. Suitable habitat may occur along rights-of-way edged with trees or in forest openings that support abundant lupine, but also in pine plantations and along logging roads or recreational trails that are edged with lupine.

**Critical Habitat Features:** Frosted elfins are usually found where the lupine is common to abundant, the habitat patch size is very large (at least 2.0-2.5 acres) and lupine patches are abundant at the landscape level. The habitat includes canopy coverage of trees and shrubs (10-50%) so that at least some of the lupine is shaded part of the day. Individuals are usually found within 10 feet of canopy cover and within 1.5 feet of lupine plants.

**Over-wintering Habitat:** Pupation has been observed to occur in a loose cocoon at the base of the host plant. In rearing studies from the eastern part of the range, pupal location has been observed to be underground. Exact location is unknown for Wisconsin.

## C. Life History

**Number of generations per year:** One

**Over-wintering stage:** Pupae overwinter.

**Over-wintering location:** In litter or underground.

**Adult Flight Period/Adults Active:** In Wisconsin, adults have been recorded between May 2 and June 14 and usually fly during a span of 21-30 days. The butterflies are most abundant just before or coincident with peak flowering of lupine and, in most years, have usually been observed during the last two weeks of May.

**Single-Season Dispersal Ability:** Unknown

**Egg location:** Oviposition occurs on young stalks of greenish lupine flower buds.

**Immature Seasonal Activity:** Larvae are present on the lupine plants for about three weeks after hatching, consuming flowers and pods until they move down the plant to pupate. This movement occurs by the end of July.

## II. Management Protocol For Authorized Incidental Take

If the management activity is for the purpose of recovering, maintaining or improving the grassland, prairie or savanna ecosystem that includes habitat for frosted elfin, **and lupine patches are mapped**, then incidental take is allowed if these conditions are followed:

Kathy: Do we want to say NO burning, even outside the flight / dev. Period, without monitoring now? Fairly major change! I think impractical esp. given lack of surveys for this species. Rich?

**A. Burning:** If burning occurs after July 31 and before April 15, and

1. the unit to be burned has gone at least three seasons unburned,  
AND monitoring is occurring,  
  
then up to 20% of the lupine on the site can be burned.
2. the unit to be burned has gone at least six seasons unburned,  
AND monitoring is occurring,  
  
then up to 25% of the lupine on the site can be burned.
3. the unit to be burned has gone at least 10 seasons unburned,  
and monitoring<sup>1</sup> is occurring,: how about keeping monitoring here as it was, but  
allowing for discretionary regimes working with BER and species experts if they are  
monitoring and gone 10 seasons unburned.  
  
then up to 1/3 of the lupine on the site can be burned.

**B. Mowing:** If mowing occurs after July 31 or before April 15 and the blade height is maintained at 4 inches or higher,

then it is assumed there will be no take. Unless evidence to the contrary is presented, there is no need for incidental take authorization.

---

<sup>1</sup>At least 2 years of baseline monitoring must occur before burning begins, and the monitoring must follow protocol acceptable to the DNR Bureaus of Endangered Resources and Integrated Science Services.

**Authorized  
February 2000**

- C. Selective Brush/Tree-cutting:** If the lupine patches are well marked and the activity is conducted so that they are unaffected (trees are not felled onto lupine, truck routes avoid the host plants, log piling occurs away from the lupine patches),
- AND if cutting occurs between April 15 and June 20, nectar plants are within 50 ft of the lupine patch are unaffected,
- then it is assumed there will be no take. Unless evidence to the contrary is presented, there is no need for incidental take authorization.
- D. Site Scarification/Tree planting:** If the lupine patches are well marked and the activity is conducted so that they are unaffected,
- AND if scarification/tree planting occurs between April 15 and June 20, nectar plants within 50 ft of the lupine patch are unaffected,
- then it is assumed there will be no take. Unless evidence to the contrary is presented, there is no need for incidental take authorization.
- E. Grazing:** Grazing regimes should be approved case-by-case. Take through grazing is allowed only after consulting with the DNR Bureaus of Endangered Resources and Integrated Science Services. Document recommendations for minimizing take on Form ER.
- E. Herbicide Use:** If the lupine patches are well marked and the activity is conducted so that they are unaffected, AND the herbicide selected does not adversely impact insects,
- AND if herbicide use occurs between April 15 and June 20, nectar plants are within 50 ft of the lupine patch are unaffected,
- then it is assumed there will be no take. Unless evidence to the contrary is presented, there is no need for incidental take authorization.

**Authorized  
February 2000**

### **Frosted Elfin Presence/Absence Survey Protocol**

---

---

For Presence /Absence Surveys or to determine extent of the population on the site:

Personnel conducting the surveys must be adequately trained in elfin butterfly survey and identification.

Survey period: Adult flight season as indicated above. Immature observations are not acceptable for frosted elfin presence.

Prime flight period: Consult the Karner blue butterfly hotline at (877) 452-7637 in early May for information on the progress of lupine phenology.

Weather conditions: Survey above 60 degrees F. Do not survey during rain or high winds.

Time of day: Survey between 8:00 AM and 6:00 PM.

Number of site visits: Survey 2 times during peak flight for two consecutive seasons.

Survey method: Search lupine plants and shrubs within 1.5 ft. of lupine plants. Plan approximately 20 minutes per acre of habitat.

## Definitions

---

### **Definition of “Site” for Frosted Elfin:**

The whole area supporting lupine from patches of abundant or common lupine out to areas where lupine plants are no longer frequently encountered, and associated nectar plants, under a single ownership or across ownership boundaries where survey and management agreements for the species are in place.